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Nata

Client:

LumCAT: LM01D05524BH

Luminaire: 92.70.127.00

Report No:

Voltage(V): 38.9800

Test No: GC2019072308

Current(A): 0.2970

LampCAT: CREE CXA1507

Power (W): 11.5800

Lamp flux(lm): 745.0

PF: 0.0000

Number of Lamps: 1

Ballast type: DC

Length(mm): 55

Width(mm): 55

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 673.48, Efficiency(%): 90.40% , Luminous Efficacy(lm/W): 58.16

Central intensity(cd): 2777.203, Maximum intensity(cd): 2777.203

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=25.6

[C90/270]Total=25.6

Field angle(10%Imax): [C0/180]Total=44.6

[C90/270]Total=44.6

Maximum s/h(1/2): C0_180=0.43 C90_270=0.43

Maximum s/h(1/4): C0_180=0.42 C90_270=0.42

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 90.40%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 95.193%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	2777.203	0.000	0	.000%	.000%
1.0	2772.352	2.655	2.655	.356%	.394%
2.0	2750.273	7.927	10.582	1.064%	1.571%
3.0	2709.211	13.057	23.639	1.753%	3.510%
4.0	2647.688	17.931	41.57	2.407%	6.173%
5.0	2553.398	22.375	63.945	3.003%	9.495%
6.0	2443.078	26.258	90.203	3.525%	13.394%
7.0	2321.789	29.575	119.779	3.970%	17.785%
8.0	2175.117	32.184	151.962	4.320%	22.564%
9.0	2024.227	34.033	185.995	4.568%	27.617%
10.0	1863.633	35.184	221.179	4.723%	32.841%
11.0	1686.867	35.477	256.656	4.762%	38.109%
12.0	1518.567	35.040	291.696	4.703%	43.312%
13.0	1349.838	34.041	325.737	4.569%	48.366%
14.0	1187.395	32.476	358.213	4.359%	53.188%
15.0	1035.654	30.519	388.732	4.097%	57.720%
16.0	873.795	27.979	416.711	3.756%	61.874%
17.0	749.391	25.277	441.988	3.393%	65.628%
18.0	634.655	22.820	464.808	3.063%	69.016%
19.0	536.414	20.374	485.182	2.735%	72.041%
20.0	440.248	17.876	503.058	2.399%	74.695%
21.0	356.948	15.308	518.366	2.055%	76.968%
22.0	292.992	13.061	531.427	1.753%	78.908%
23.0	232.495	11.026	542.453	1.480%	80.545%
24.0	186.659	9.164	551.617	1.230%	81.906%
25.0	146.616	7.578	559.195	1.017%	83.031%
26.0	115.073	6.177	565.372	.829%	83.948%
27.0	93.945	5.114	570.486	.686%	84.707%
28.0	76.845	4.324	574.81	.580%	85.349%
29.0	63.914	3.683	578.492	.494%	85.896%
30.0	55.153	3.215	581.707	.432%	86.374%
31.0	48.002	2.871	584.578	.385%	86.800%
32.0	42.792	2.601	587.179	.349%	87.186%
33.0	39.080	2.412	589.591	.324%	87.544%
34.0	35.944	2.270	591.861	.305%	87.881%
35.0	33.722	2.164	594.025	.290%	88.203%
36.0	32.168	2.098	596.123	.282%	88.514%
37.0	31.198	2.067	598.189	.277%	88.821%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	30.572	2.062	600.251	.277%	89.127%
39.0	30.066	2.070	602.321	.278%	89.434%
40.0	29.742	2.086	604.407	.280%	89.744%
41.0	29.454	2.108	606.515	.283%	90.057%
42.0	29.109	2.128	608.643	.286%	90.373%
43.0	28.617	2.138	610.781	.287%	90.690%
44.0	28.090	2.140	612.921	.287%	91.008%
45.0	27.401	2.133	615.054	.286%	91.325%
46.0	26.571	2.111	617.164	.283%	91.638%
47.0	25.643	2.077	619.241	.279%	91.947%
48.0	24.680	2.034	621.275	.273%	92.249%
49.0	23.660	1.985	623.261	.266%	92.544%
50.0	22.549	1.927	625.187	.259%	92.830%
51.0	21.495	1.863	627.051	.250%	93.106%
52.0	20.517	1.803	628.853	.242%	93.374%
53.0	19.491	1.740	630.594	.234%	93.632%
54.0	18.478	1.674	632.267	.225%	93.881%
55.0	17.627	1.612	633.879	.216%	94.120%
56.0	16.784	1.555	635.434	.209%	94.351%
57.0	15.968	1.497	636.931	.201%	94.573%
58.0	15.223	1.442	638.374	.194%	94.788%
59.0	14.548	1.392	639.765	.187%	94.994%
60.0	13.838	1.341	641.106	.180%	95.193%
61.0	13.127	1.287	642.393	.173%	95.384%
62.0	12.537	1.237	643.63	.166%	95.568%
63.0	12.009	1.194	644.824	.160%	95.745%
64.0	11.482	1.153	645.976	.155%	95.916%
65.0	10.997	1.112	647.089	.149%	96.082%
66.0	10.582	1.077	648.166	.145%	96.241%
67.0	10.209	1.045	649.211	.140%	96.397%
68.0	9.900	1.019	650.23	.137%	96.548%
69.0	9.619	0.996	651.225	.134%	96.696%
70.0	9.394	0.976	652.202	.131%	96.841%
71.0	9.169	0.959	653.161	.129%	96.983%
72.0	8.972	0.943	654.105	.127%	97.123%
73.0	8.859	0.932	655.037	.125%	97.262%
74.0	8.775	0.927	655.964	.124%	97.399%
75.0	9.063	0.943	656.907	.127%	97.539%

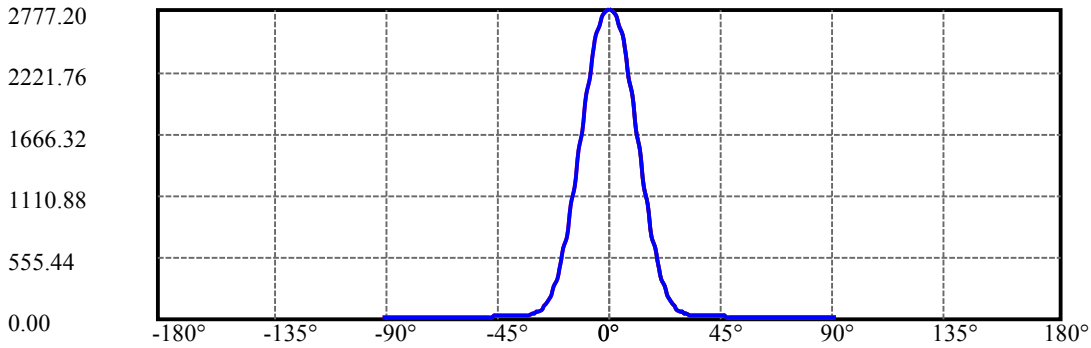
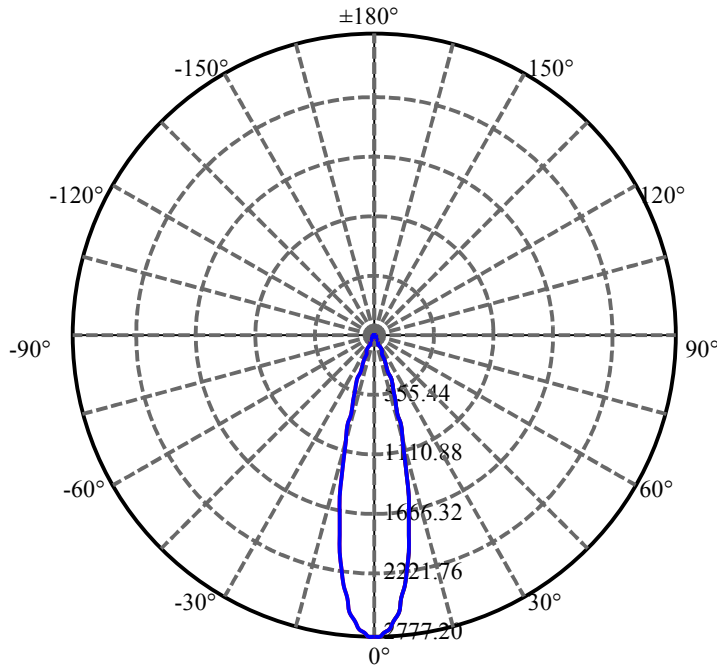
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	9.127	0.966	657.872	.130%	97.683%
77.0	8.986	0.966	658.838	.130%	97.826%
78.0	8.677	0.945	659.783	.127%	97.967%
79.0	8.768	0.937	660.721	.126%	98.106%
80.0	9.176	0.967	661.688	.130%	98.249%
81.0	9.633	1.017	662.705	.137%	98.400%
82.0	10.069	1.068	663.774	.143%	98.559%
83.0	10.624	1.125	664.898	.151%	98.726%
84.0	11.285	1.194	666.092	.160%	98.903%
85.0	11.637	1.251	667.343	.168%	99.089%
86.0	11.855	1.284	668.627	.172%	99.280%
87.0	11.496	1.278	669.905	.172%	99.469%
88.0	11.039	1.234	671.139	.166%	99.653%
89.0	10.624	1.187	672.327	.159%	99.829%
90.0	10.378	1.152	673.478	.155%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	581.71	78.08%	86.37%
0-40	604.41	81.13%	89.74%
0-60	641.11	86.05%	95.19%
0-90	672.33	90.25%	99.83%
0-120	672.33	90.25%	99.83%
0-180	673.48	90.40%	100.00%
60-90	32.56	4.37%	4.83%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-22.67	538.78	72.32%	80.00%

ZONAL LUMEN SUMMARY

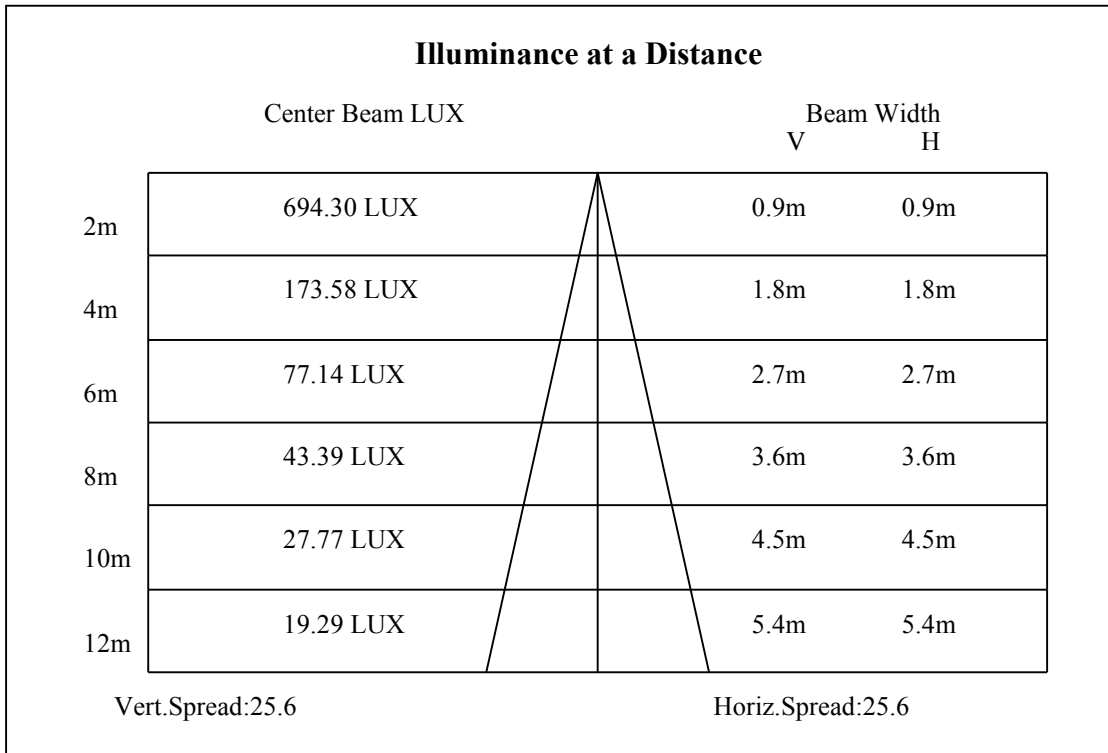
0-10	221.18
10-20	281.88
20-30	78.65
30-40	22.70
40-50	20.78
50-60	15.92
60-70	11.10
70-80	9.49
80-90	10.64
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

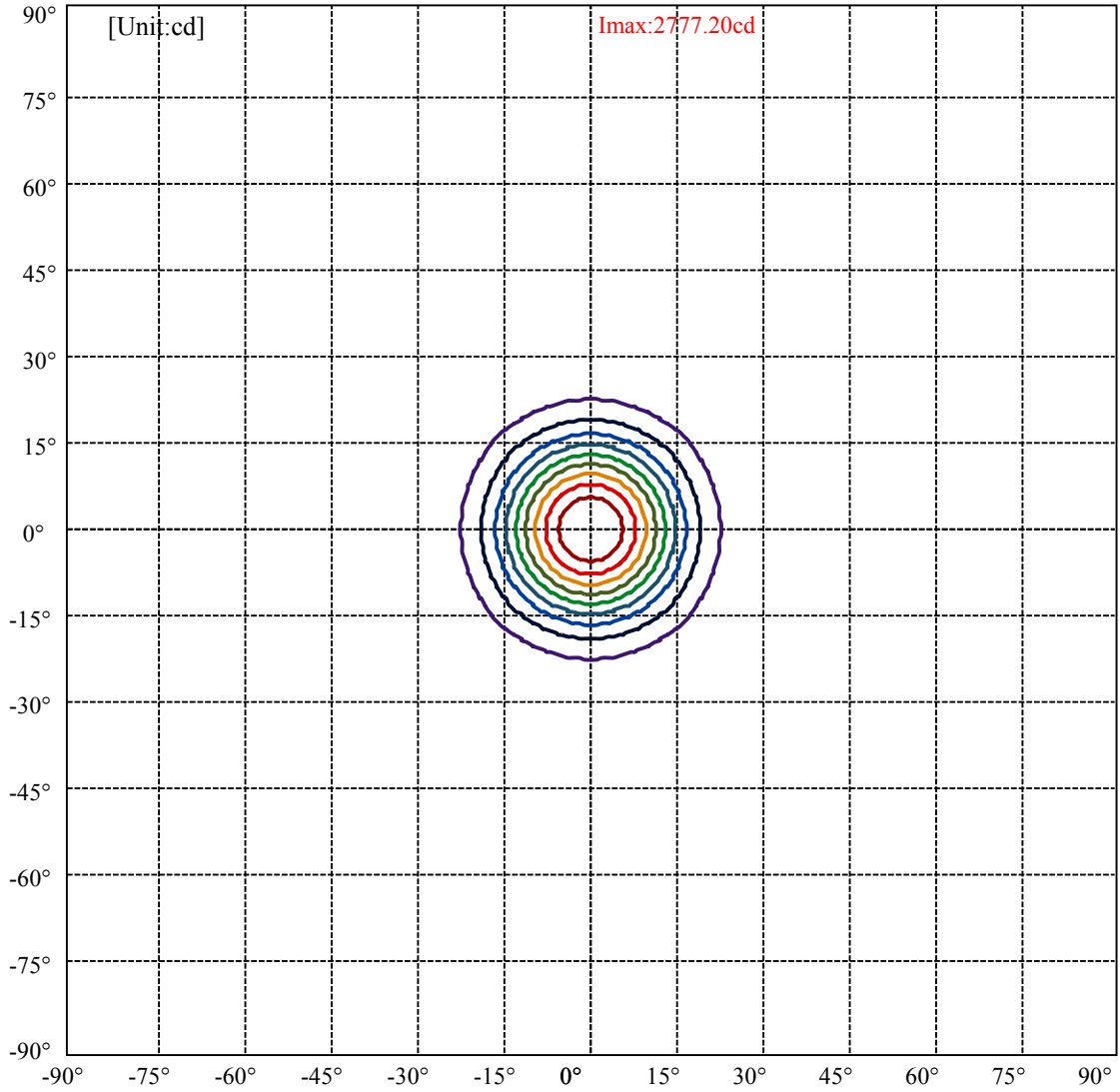


C0(Max): ———
C0/C180: ———
C90/C270: ———

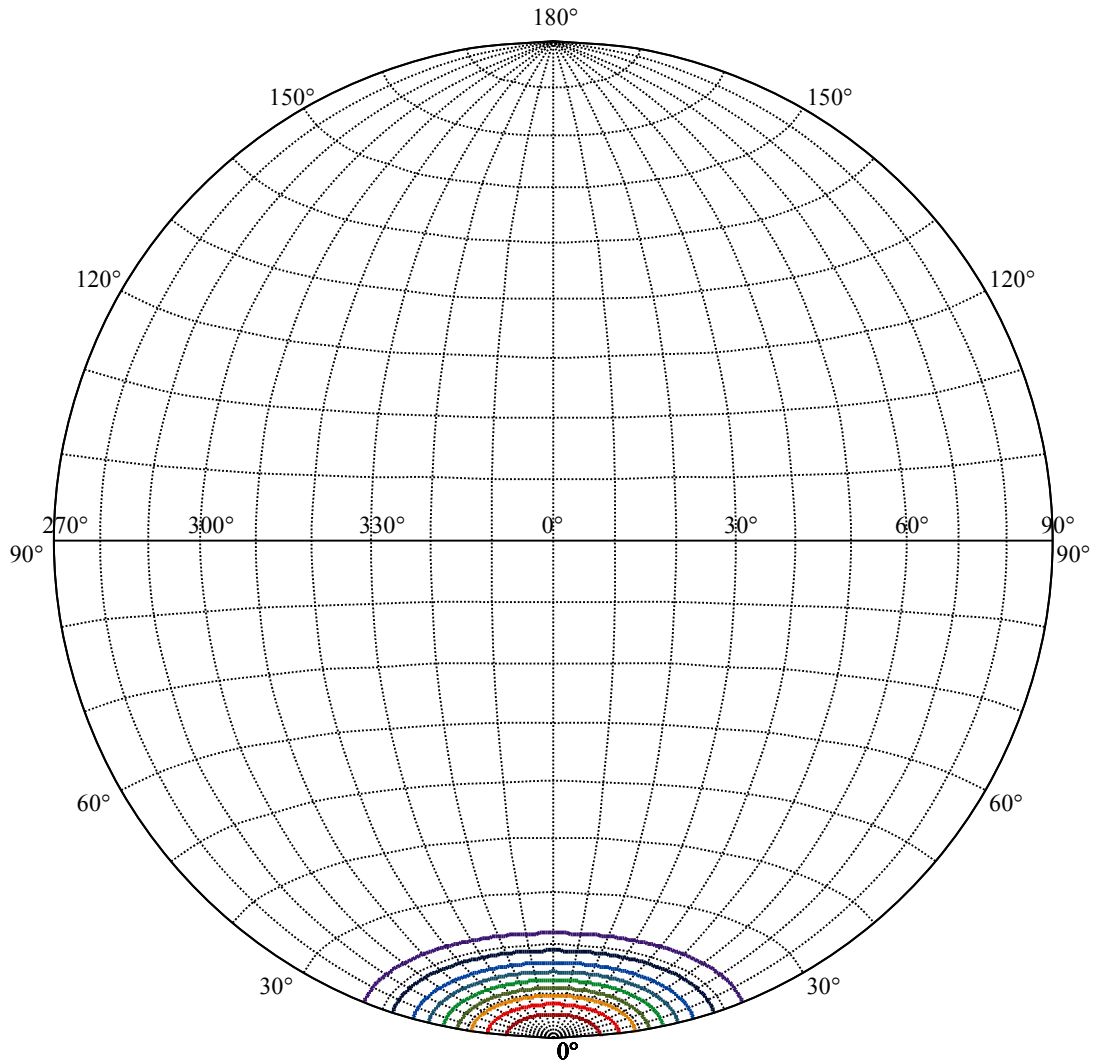
Field angle(10%Imax):C0/180Left:22.3 Right:22.3
:C90/270Left:22.3 Right:22.3

Beam Angle(50%Imax):C0/180Left:12.8 Right:12.8
:C90/270Left:12.8 Right:12.8





(10%Imax) 277.72	—
(20%Imax) 555.441	—
(30%Imax) 833.161	—
(40%Imax) 1110.88	—
(50%Imax) 1388.6	—
(60%Imax) 1666.32	—
(70%Imax) 1944.04	—
(80%Imax) 2221.76	—
(90%Imax) 2499.48	—



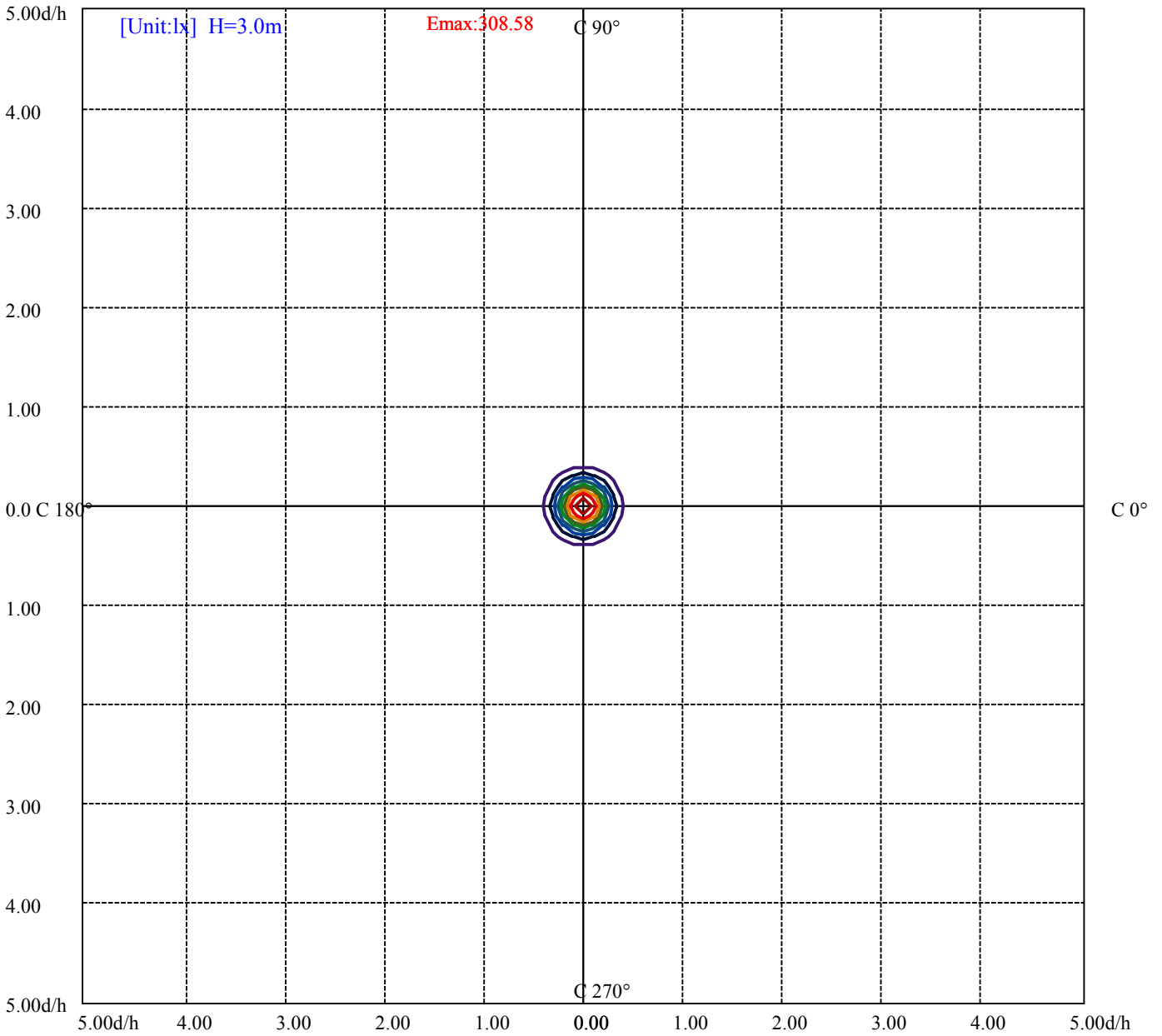
House

[Unit:cd]

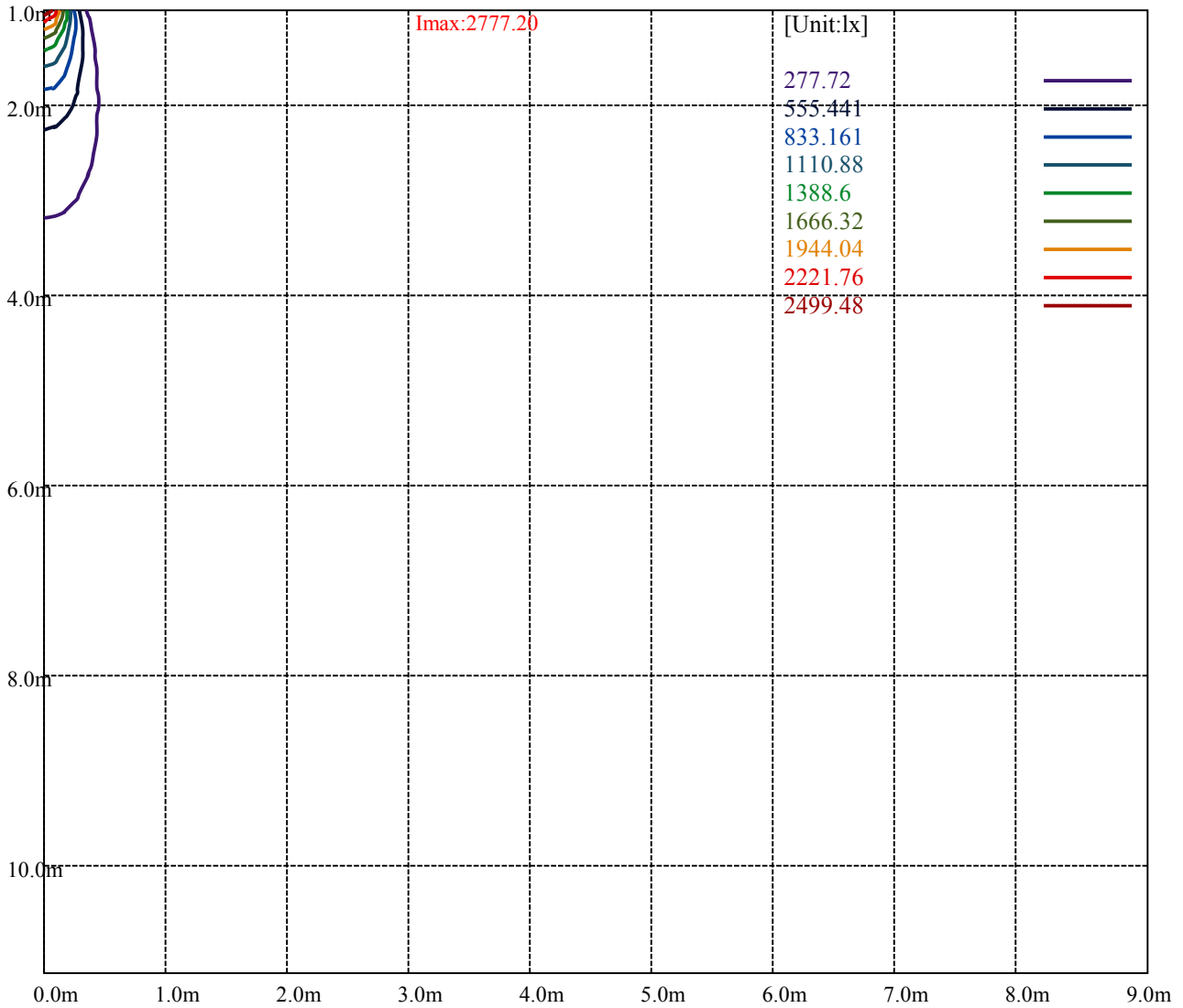
Road

Imax:2777.20

(10%Imax) 277.72	—
(20%Imax) 555.441	—
(30%Imax) 833.161	—
(40%Imax) 1110.88	—
(50%Imax) 1388.6	—
(60%Imax) 1666.32	—
(70%Imax) 1944.04	—
(80%Imax) 2221.76	—
(90%Imax) 2499.48	—



- (10%Emax) 30.85778
- (20%Emax) 61.71556
- (30%Emax) 92.57345
- (40%Emax) 123.4311
- (50%Emax) 154.2889
- (60%Emax) 185.1467
- (70%Emax) 216.0045
- (80%Emax) 246.8622
- (90%Emax) 277.72



Luminance Table

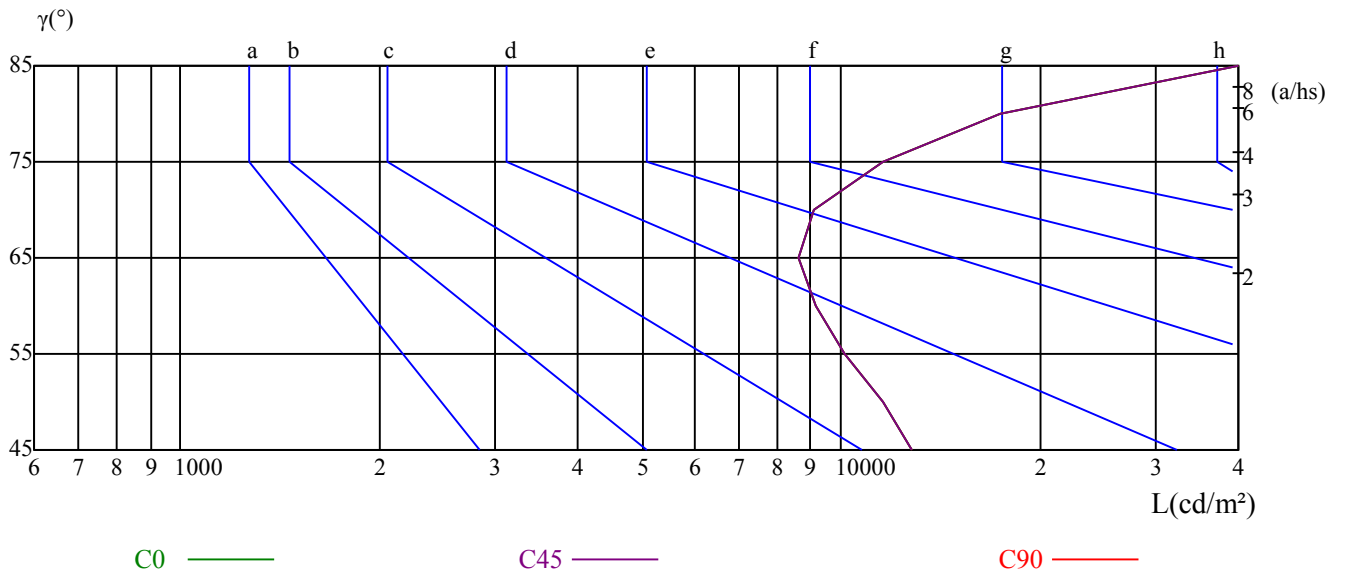
γ	45	50	55	60	65	70	75	80	85
C0	12810	11597	10159	9149	8602	9080	11576	17468	44138
C45	12810	11597	10159	9149	8602	9080	11576	17468	44138
C90	12810	11597	10159	9149	8602	9080	11576	17468	44138

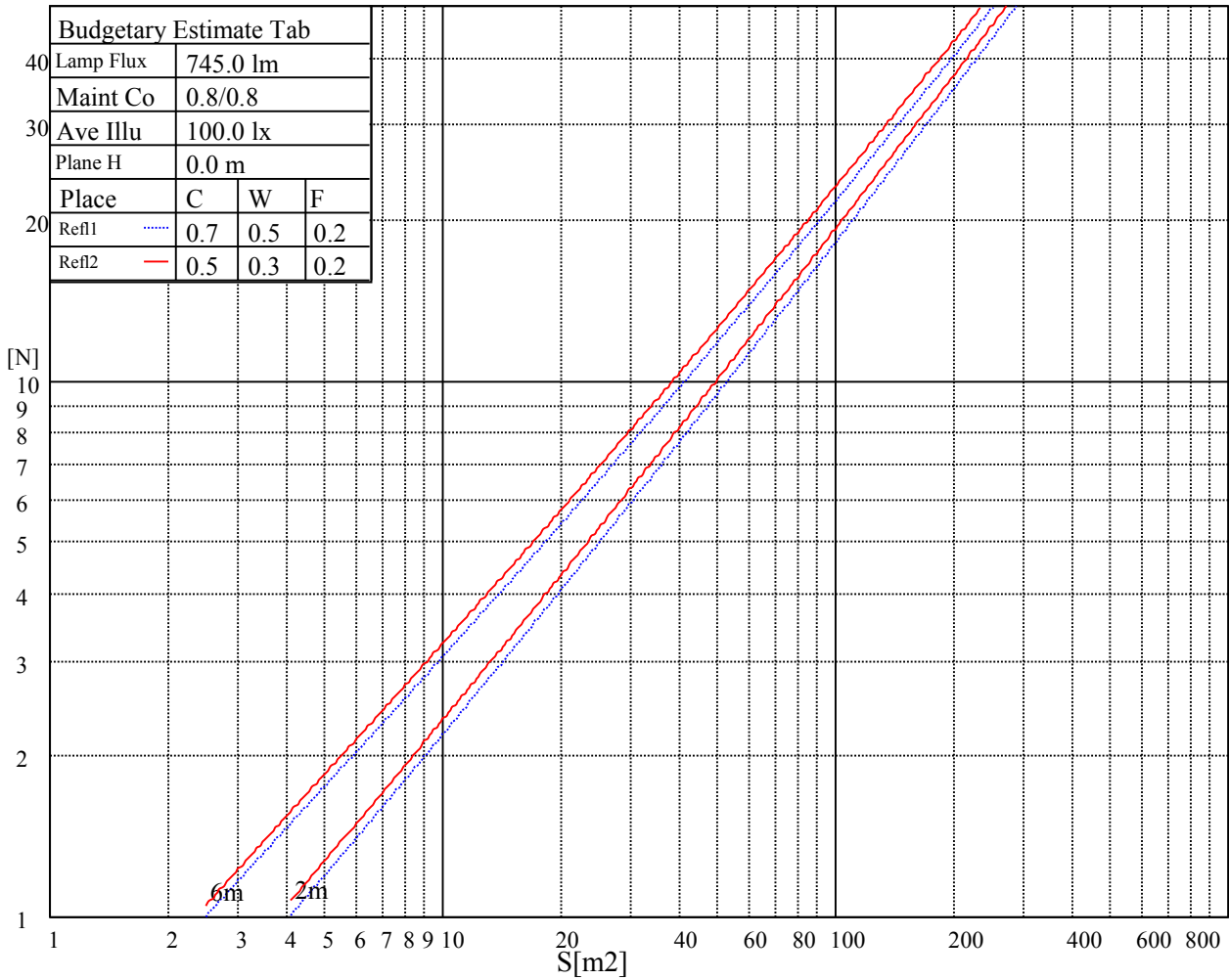
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
8602	8602	8602	11576	11576	11576	44138	44138	44138

Glare Table

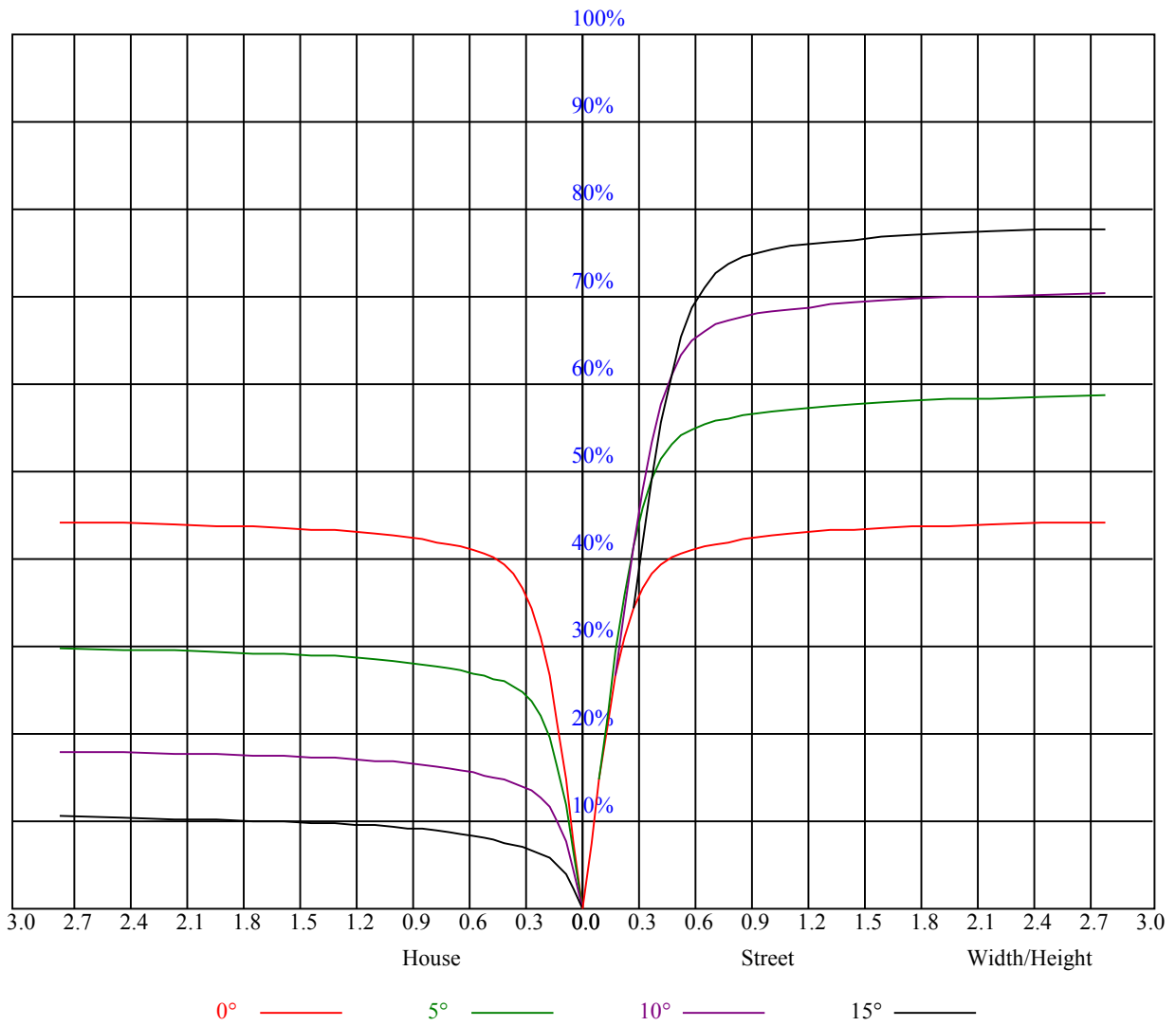
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

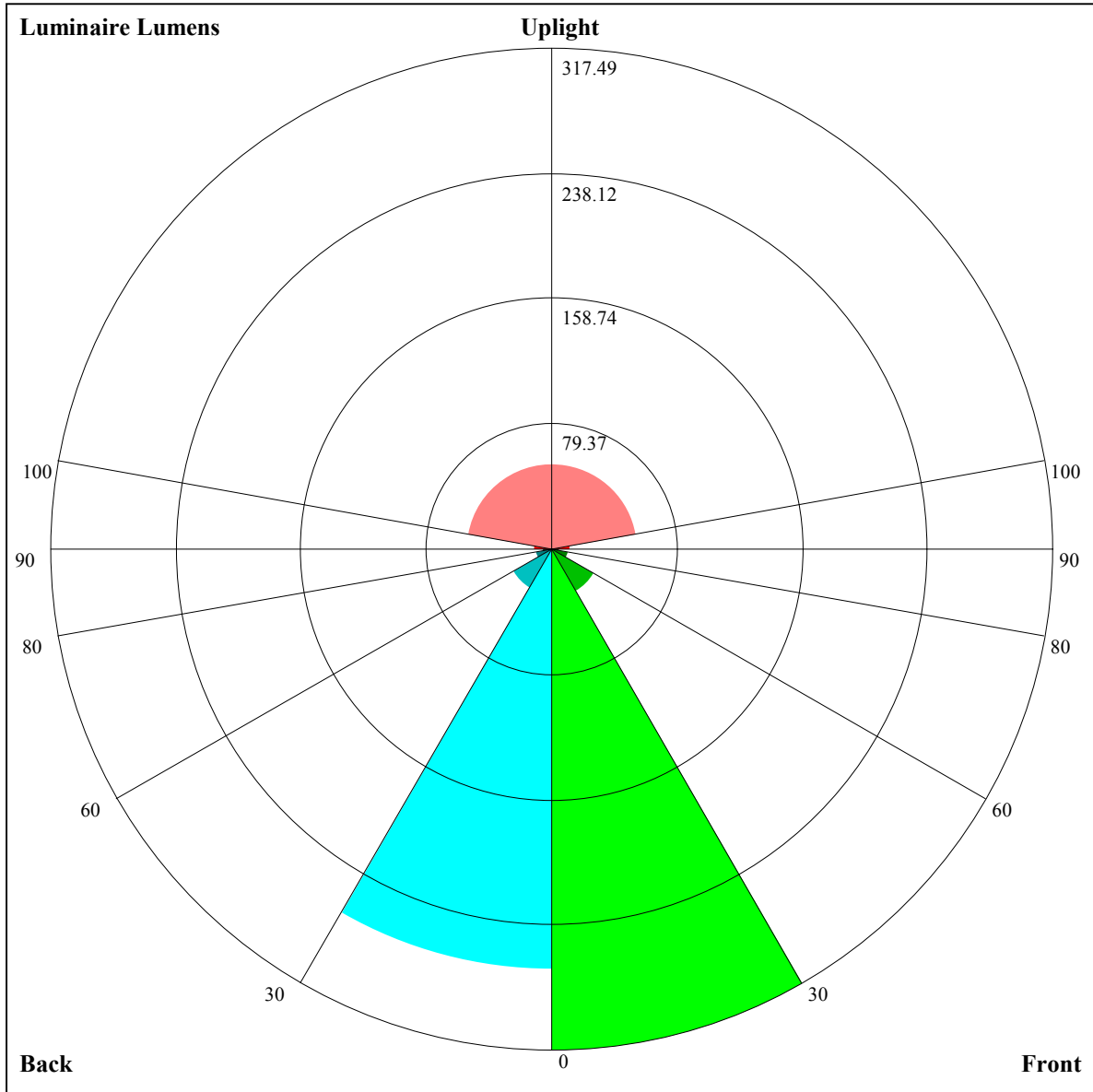
Luminance Limiting Curve





RHOCC	80			70			50			30			10			0
RHOW	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR	COEFFICIENTS OF UTILIZATION RHOFC=20 CU															
0	1.08	1.08	1.08	1.05	1.05	1.05	1.00	1.00	1.00	0.96	0.96	0.96	0.92	0.92	0.92	0.90
1	1.00	0.98	0.96	0.98	0.96	0.95	0.95	0.93	0.92	0.91	0.90	0.89	0.88	0.87	0.86	0.85
2	0.95	0.91	0.88	0.93	0.90	0.87	0.90	0.88	0.86	0.88	0.86	0.84	0.85	0.83	0.82	0.81
3	0.90	0.86	0.83	0.89	0.85	0.82	0.86	0.83	0.81	0.84	0.82	0.80	0.82	0.80	0.78	0.77
4	0.86	0.82	0.78	0.85	0.81	0.78	0.83	0.80	0.77	0.81	0.78	0.76	0.80	0.77	0.75	0.74
5	0.82	0.78	0.75	0.81	0.77	0.74	0.80	0.76	0.74	0.79	0.76	0.73	0.77	0.75	0.73	0.71
6	0.79	0.75	0.72	0.78	0.74	0.71	0.77	0.74	0.71	0.76	0.73	0.71	0.75	0.72	0.70	0.69
7	0.76	0.72	0.69	0.76	0.72	0.69	0.75	0.71	0.69	0.74	0.71	0.68	0.73	0.70	0.68	0.67
8	0.74	0.70	0.67	0.73	0.69	0.67	0.72	0.69	0.66	0.72	0.68	0.66	0.71	0.68	0.66	0.65
9	0.72	0.67	0.65	0.71	0.67	0.65	0.70	0.67	0.64	0.70	0.66	0.64	0.69	0.66	0.64	0.63
10	0.69	0.65	0.63	0.69	0.65	0.63	0.68	0.65	0.63	0.68	0.65	0.62	0.67	0.64	0.62	0.61





Luminaire Lumens:

FL=317.49,FM=30.58,FH=10.14,FVH=5.32

BL=266.06,BM=28.9,BH=10.25,BVH=6.32

UL=11.32,UH=53.88

BUG Rating:B1-U2-G0

Intensity data(cd)

C/γ(°)	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0
0.0	2764.69	2787.19	2795.63	2774.25	2737.69	2655.56	2550.94	2464.31	2328.19
45.0	2772.00	2757.94	2723.06	2667.38	2601.00	2507.06	2398.50	2283.75	2150.44
90.0	2772.00	2724.19	2644.88	2566.69	2469.38	2338.88	2194.31	2047.50	1868.06
135.0	2800.13	2750.06	2684.25	2614.50	2523.38	2376.00	2248.31	2094.19	1919.25
180.0	2764.69	2742.19	2703.94	2639.25	2556.00	2445.19	2295.56	2149.31	1967.06
225.0	2772.00	2768.06	2751.75	2712.94	2640.94	2559.94	2464.31	2314.13	2172.38
270.0	2772.00	2809.13	2826.00	2822.63	2799.56	2756.25	2691.00	2619.56	2507.63
315.0	2800.13	2840.06	2872.69	2876.06	2853.56	2788.31	2701.69	2601.56	2487.94
360.0	2764.69	2787.19	2795.63	2774.25	2737.69	2655.56	2550.94	2464.31	2328.19
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	2188.69	2072.81	1897.31	1743.19	1586.81	1388.25	1227.94	1074.94	911.81
45.0	1974.38	1821.94	1657.69	1473.75	1288.13	1128.94	962.44	815.63	701.44
90.0	1704.38	1518.19	1334.25	1118.48	1013.74	869.79	751.56	637.71	509.06
135.0	1739.81	1572.19	1385.44	1236.38	1083.94	933.19	795.38	658.13	543.38
180.0	1803.38	1612.13	1419.75	1269.56	1114.59	980.78	824.51	695.53	572.06
225.0	2013.75	1815.19	1636.88	1459.69	1221.19	1101.66	963.79	790.26	677.36
270.0	2379.38	2247.75	2077.31	1919.25	1728.00	1537.31	1365.75	1200.38	1015.31
315.0	2390.06	2248.88	2086.31	1928.25	1762.31	1559.25	1393.88	1117.80	1064.70
360.0	2188.69	2072.81	1897.31	1743.19	1586.81	1388.25	1227.94	1074.94	911.81
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	805.50	708.75	590.63	511.31	435.94	358.88	287.44	250.37	176.63
45.0	585.00	495.56	404.44	326.25	284.06	207.68	165.21	134.38	109.01
90.0	417.32	338.96	266.12	207.51	164.70	127.41	100.29	82.46	67.78
135.0	446.06	361.13	287.44	211.05	165.88	125.21	98.83	81.96	71.61
180.0	466.65	379.63	301.50	224.27	178.14	141.08	105.47	85.78	72.68
225.0	552.71	437.74	363.71	278.38	201.43	160.65	126.28	93.43	78.75
270.0	883.69	764.44	622.69	518.63	426.38	344.81	290.25	195.92	151.59
315.0	920.31	805.11	685.46	578.19	487.41	394.26	319.50	248.63	192.54
360.0	805.50	708.75	590.63	511.31	435.94	358.88	287.44	250.37	176.63
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	141.47	110.19	86.91	72.00	59.68	50.29	43.88	39.04	34.76
45.0	87.92	71.55	60.64	52.93	43.71	38.93	35.55	31.61	29.42
90.0	57.99	49.56	43.09	38.76	35.33	32.23	30.60	29.36	28.91
135.0	64.46	57.21	50.63	45.73	41.91	39.83	38.42	36.28	35.04
180.0	64.52	56.76	50.85	45.39	41.96	39.88	38.31	36.23	34.65
225.0	66.66	57.32	50.96	46.24	41.91	38.14	35.72	33.58	32.34
270.0	114.75	89.27	73.69	61.88	53.38	47.98	41.96	38.42	35.49
315.0	153.79	122.91	94.56	78.30	66.15	55.07	48.21	43.03	39.15
360.0	141.47	110.19	86.91	72.00	59.68	50.29	43.88	39.04	34.76
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	32.18	30.43	28.97	28.29	28.18	28.41	28.80	28.97	29.14
45.0	28.07	27.17	26.83	26.72	26.61	26.61	26.66	26.49	26.10
90.0	28.97	29.19	29.64	29.76	29.93	29.87	29.59	29.03	28.24
135.0	34.48	34.09	33.75	33.64	33.30	32.96	32.29	31.67	30.94
180.0	33.47	32.68	32.01	31.28	30.71	29.93	29.08	27.96	26.89
225.0	31.28	30.21	29.59	28.69	27.84	27.17	26.21	25.09	24.08
270.0	33.24	32.06	31.33	30.88	30.71	30.49	30.21	29.81	29.48
315.0	35.66	33.75	32.46	31.28	30.66	30.21	30.04	29.93	29.87
360.0	32.18	30.43	28.97	28.29	28.18	28.41	28.80	28.97	29.14

Intensity data(cd)

C/γ(°)	45.0	46.0	47.0	48.0	49.0	50.0	51.0	52.0	53.0
0.0	29.08	28.80	28.29	27.68	26.89	25.65	24.58	23.51	22.16
45.0	25.71	24.92	24.13	23.40	22.28	21.09	20.19	19.29	18.39
90.0	27.51	26.49	25.20	24.19	23.23	21.83	20.93	19.97	18.84
135.0	29.48	28.35	27.39	26.10	24.86	23.91	22.61	21.71	20.87
180.0	25.76	24.81	23.91	22.89	21.94	20.93	19.80	18.96	18.11
225.0	23.01	21.88	20.42	19.52	18.56	17.83	16.93	16.03	15.02
270.0	28.91	27.90	26.94	25.71	24.58	23.40	22.16	21.09	19.97
315.0	29.76	29.42	28.86	27.96	26.94	25.76	24.75	23.57	22.56
360.0	29.08	28.80	28.29	27.68	26.89	25.65	24.58	23.51	22.16
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	21.21	20.25	19.24	18.17	17.27	16.48	15.47	14.57	13.73
45.0	17.38	16.37	15.41	14.74	14.01	13.28	12.66	11.81	11.25
90.0	17.78	16.93	16.03	15.24	14.46	13.73	13.05	12.32	11.59
135.0	19.91	18.96	18.17	17.27	16.65	16.14	15.36	14.79	14.29
180.0	16.99	16.37	15.53	14.79	14.06	13.44	12.88	12.26	11.81
225.0	14.23	13.61	13.05	12.66	12.09	11.48	11.03	10.52	10.13
270.0	19.01	18.17	17.33	16.37	15.64	14.91	14.06	13.44	12.83
315.0	21.32	20.36	19.52	18.51	17.61	16.93	16.20	15.30	14.68
360.0	21.21	20.25	19.24	18.17	17.27	16.48	15.47	14.57	13.73
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	12.94	12.26	11.59	11.14	10.58	10.07	9.73	9.39	9.11
45.0	10.86	10.24	9.73	9.34	8.83	8.55	8.27	7.99	7.82
90.0	11.03	10.41	9.90	9.51	9.23	8.94	8.78	8.66	8.44
135.0	13.84	13.44	13.11	12.77	12.54	12.43	12.21	12.04	11.81
180.0	11.25	10.74	10.29	9.84	9.62	9.39	9.17	9.06	8.89
225.0	9.90	9.56	9.11	8.83	8.49	8.21	7.99	7.82	7.59
270.0	12.21	11.59	11.14	10.63	10.13	9.73	9.34	9.00	8.72
315.0	14.06	13.61	13.11	12.60	12.26	11.87	11.48	11.19	10.97
360.0	12.94	12.26	11.59	11.14	10.58	10.07	9.73	9.39	9.11
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	8.94	8.83	8.72	8.55	8.38	8.27	8.21	8.10	8.27
45.0	7.59	7.43	7.31	7.14	7.03	6.98	6.92	6.86	6.86
90.0	8.21	8.10	7.99	7.93	7.93	7.93	7.88	7.93	8.61
135.0	11.64	11.48	11.42	13.33	14.40	14.06	12.32	12.26	13.33
180.0	8.72	8.66	8.72	9.73	9.79	9.23	8.72	9.45	10.46
225.0	7.37	7.31	7.20	7.20	7.20	7.31	7.31	7.37	7.48
270.0	8.55	8.38	8.21	8.10	7.93	7.82	7.76	7.93	7.93
315.0	10.74	10.69	10.63	10.52	10.35	10.29	10.29	10.24	10.46
360.0	8.94	8.83	8.72	8.55	8.38	8.27	8.21	8.10	8.27
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	8.21	8.04	7.99	8.66	9.39	10.24	9.73	9.56	9.34
45.0	6.86	7.03	7.54	8.16	8.44	8.55	8.33	7.99	7.71
90.0	9.51	10.58	11.53	12.49	12.77	12.83	12.26	11.48	10.91
135.0	14.74	15.75	16.65	16.93	16.65	16.37	16.14	15.02	14.06
180.0	11.59	12.54	13.33	13.89	13.89	13.67	13.50	12.88	12.38
225.0	7.88	8.33	9.11	9.68	10.01	10.07	9.17	8.94	8.72
270.0	7.93	7.99	8.44	9.45	10.13	10.52	10.52	10.29	9.84
315.0	10.35	10.29	10.41	11.03	11.81	12.60	12.32	12.15	12.04
360.0	8.21	8.04	7.99	8.66	9.39	10.24	9.73	9.56	9.34

Intensity data(cd)

C/γ(°)	90.0
0.0	8.89
45.0	7.31
90.0	10.18
135.0	13.22
180.0	11.70
225.0	9.96
270.0	9.34
315.0	12.43
360.0	8.89